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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/627,796   | 07/25/2003  | Taner Dosluoglu      | DSR14725            | 2665             |
| 7590   | 08/24/2004  |                      | EXAMINER            |                  |
| George O. SAILE<br>28 DAVIS AVENUE<br>POUGHKEEPSIE, NY 12603 |             |                      | LOKE, STEVEN HO YIN |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2811                |                  |

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/627,796

Applicant(s)

DOSLUOGLU, TANER

Examiner

Steven Loke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10 is/are rejected.
- 7) ☒ Claim(s) 1-9 and 11-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/29/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

1. The disclosure is objected to because of the following informalities: The written description (page 7, line 13) shows the PN junction 15 is formed between the P well 14 and the N well 12. However, Fig. 1 shows the PN junction [15] is formed between the n-well [12] and the p-type substrate [10]. Therefore, it is unclear where is the correct PN junction [15] in the specification.

Appropriate correction is required.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The phrase "accumulating charge at the PN junction between said P well and said N well during a charge integration period" in claim 1. The claimed subject matters of claims 2 and 4. The phrase "accumulating charge at the PN junction between said N well and said P well during a charge integration period" in claim 8. The claimed subject matters of claims 9, 11, 17 and 23.

3. Claims 1-26 are objected to because of the following informalities: Claims 1, 8, 15, 21, line 8, the phrase "said the thickness" has no antecedent basis. Claim 13, lines 1-2, the phrase "said resetting the potential between said P well and said substrate" has no antecedent basis. Claim 14, the phrase "said determining the potential of said gate" has no antecedent basis. Claim 15, lines 14-15, the phrase "said means for determining the potential of said floating gate" has no antecedent basis. Claim 25, lines 1-2, the phrase "said means for resetting the potential between said P well and said substrate" has no antecedent basis. Claim 26, lines 1-2, the phrase "said means for

reading the potential of said gate” has no antecedent basis. Appropriate correction is required.

4. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 10, lines 2-3, the phrase “forming an electrical connection between said contact region formed in said P well and a means for resetting the potential between said P well and said substrate” is vague and indefinite. The specification (page 10, lines 1-8) and claim 8 disclose there is no contact regions in the P well and a means for resetting the potential between said N well and said substrate. In addition, the contact region [20] is formed in the N well [14]. Therefore, the phrase should rewrite as “forming an electrical connection between said contact region formed in said N well and a means for resetting the potential between said N well and said substrate” in claim 10.

5. Claims 1-9 and 11-26 would be allowable if rewritten or amended to overcome the objections set forth in this Office action.

6. The following is a statement of reasons for the indication of allowable subject matter: The first major difference in the claims not found in the prior art of record is the steps comprising: resetting the potential between said P well and said substrate during a reset period wherein a tunneling current between said P well and said floating gate resets the potential of said floating gate; accumulating charge at the PN junction between said P well and said N well during a charge integration period, wherein said charge integration period follows said reset period; and reading the potential of said

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gate after said charge integration period has been completed. The second major difference in the claims not found in the prior art of record is the steps comprising: resetting the potential between said N well and said substrate during a reset period wherein a tunneling current between said N well and said floating gate resets the potential of said floating gate; accumulating charge at the PN junction between said N well and said P well during a charge integration period, wherein said charge integration period follows said reset period; and reading the potential of said gate after said charge integration period has been completed. The third major difference in the claims not found in the prior art of record is the means for reading or determining the potential of said gate, wherein the only electrical connection to said floating gate is to connect said floating gate to said means for reading or determining the potential of said floating gate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Loke whose telephone number is (571) 272-1657. The examiner can normally be reached on 7:50 am to 5:20 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (571) 272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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August 22, 2004

Steven Loka  
Primary Examiner  
